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## Systems Engineering and Integration

System Engineering and Integration defines, develops and verifies the layered Ballistic Missile Defense System, providing the collaborative and detailed systems engineering and integration required across the entire spectrum of missile defense war fighting capabilities.

## Overview

- spans the development of individual components, system elements and segments (boost, midcourse and terminal)
- provides the engineering foundation, modeling and simulation facilities, engineering development, and verification efforts needed to manage and field a capability-based system.



## **Details**

Systems Engineering is organized into 10 Functional Working Groups:

- Concept Engineering: the planning and execution of systems engineering and integration activities that includes the development of processes and the technology requirements necessary to support it
- Design and Specification Engineering: the detailed design and specification of Ballistic Missile Defense System Blocks
- Implementation and Software Engineering: executing all system engineering activities necessary to implement the operational system
- Verification and Assessment Engineering: verifies and evaluates the System Capability Specifications, Technical Objectives and Goals and the Adversary Data Package
- Threat Systems Engineering: planning, execution, delivery and user support of adversary characterization products
- System Analysis: a common analysis source for all Functional Working Group efforts
- Risk Engineering: identify missile defense technical performance risks and associated trade spaces
- Modeling and Simulation Engineering: develops, maintains, verifies and validates support for Modeling and Simulation tools
- Program Management and Control Program: overall program operations support to the Deputy for System Engineering and Integration
- Cost and Investment Analysis: supports the other Functional Working Groups via the Program Objective Memorandum, budget, costing support and investment analysis for the Ballistic Missile Defense System.

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